

We claim:

1. A method for treating an animal to achieve a positive effect on the health of the animal comprising applying a biologically-active compound to the muzzle of an animal which subsequently cleans its muzzle with its tongue, thereby distributing the compound into the oral and/or nasal cavities of the animal to contact the nasal and/or oral mucosa.
2. The method of claim 1 wherein said compound contains one or more biologically-active agents selected from the group of vaccines and pharmaceuticals used to prevent and/or treat diseases of the respiratory system, the reproductive system, the urinary system, the gastrointestinal/digestive system, the integument/musculoskeletal system, the hemolymphatic system, the endocrine system, the nervous system, the eye and ear.
3. The method of claim 1 wherein the compound contains one or more biologically-active agents selected from the group of vaccines and pharmaceuticals used to prevent and/or treat diseases caused by viruses, mycoplasma, chlamydia, protozoa, rickettsia, coccidia, bacteria, or fungus, and internal and external parasites.
4. The method of claim 3 wherein the parasites are helminths.
5. The method of claim 3 wherein the parasites are arthropods.

6. The method of claim 1 wherein the compound contains one or more biologically-active agents selected from the group of live, attenuated, killed or altered individual biological organisms and mixtures thereof.
- 5 7. The method of claim 1 wherein the compound contains one or more biologically-active agents selected from the group of whole organisms, specific and non-specific subunits of organisms, structural and non-structural components of organisms comprising cell wall, cell wall components, endotoxins, exotoxins, culture media supernatant, intracellular proteins and organelles including nuclear and non nuclear materials.
- 10 8. The method of claim 1 wherein the compound contains one or more biologically-active agents selected from the group of pharmaceuticals comprising antibacterials, hormones, and organic and inorganic medicants.
9. The method of claim 1 wherein the compound contains one or more immuno-modulating substances.
- 15 10. The method of claim 1 wherein the compound contains one or more autogenous vaccines or components thereof.
11. The method of claim 1 wherein the compound contains one or more compounds selected from the group of aluminum hydroxide salts, aluminum hydroxide gels, alum, saponin and saponin derivatives, mycobacterial cell wall extract, oil, oil emulsions, superantigens and lipopolysaccharides.
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12. The method of claim 1 wherein the compound contains one or more palatability enhancers, selected from the group of sugars, carbohydrates, aromatics, molasses, sucrose, or fructose, and plant flavorings.
13. The method of claim 1 wherein the compound optionally contains one or more  
5 additional components that provide enhanced viscosity, aroma, visual or machine-aided identification of dosed animals, stability of the biologically-active compound, release modulation or uptake modulation of the biologically-active compound, and adhesive characteristics.
14. A vaccine or pharmaceutical composition suitable for application to the muzzle of  
10 an animal, containing a biologically-active material which stimulates an immune response, affects an endocrine function or provides a therapeutic function after distribution to the oral and nasal mucosa of the animal by the licking action of the animal's tongue in cleaning its muzzle.
15. The composition of claim 14 wherein a palatability enhancer is added to the  
15 composition.
16. The method of claim 1 wherein the method of applying to the muzzle comprises contacting the animal with a brush or roller, liquid spray, aerosol, spreading a liquid, paste, salve, or film thereon, or application of a carrier web thereto.